

REMARKS/ARGUMENTS

At the outset, Applicants wish to thank Examiner Morris for indicating that Claims 3-7, 10-13, 20, 24, 25, 27, and 31 are only objected to as depending from a rejected base claim and would be allowable if rewritten in independent form including all the limitations of any base claim and any intervening claim. Applicants submit that, in view of the present amendments and remarks all of the pending claims are now allowable.

The rejection of Claim 1 under 35 U.S.C. § 112, first paragraph, is respectfully traversed. Applicants submit that the specification, as filed, provides abundant disclosure to permit one of skill in the art to make and use the claimed compounds in which C and/or E are defined such that the “lower alkyl portion of said lower alkyl group, hydroxy-lower alkyl group, carboxy-lower alkyl group, halogeno-lower alkyl group, amino-lower alkyl group, azido-lower alkyl group, aryl-lower alkyl group, and carbamoyl-lower alkyl group may contain a hetero atom, which is selected from the group consisting of oxygen and nitrogen.”

All this term means is that when either C or E is a lower alkyl group, a hydroxy-lower alkyl group, a carboxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, an azido-lower alkyl group, an aryl-lower alkyl group, or a carbamoyl-lower alkyl group, then the lower alkyl portion of that group may contain a heteroatom which is either oxygen or nitrogen. This term does not permit a “dangling” heteroatom as stated at the bottom of page 2 of the Office Action.

Moreover, the present specification provides abundant teachings in regard to such groups. For example, on page 11, lines 2-12, the present specification lists the following examples of such groups:

2-hydroxyethoxymethyl group;
methoxymethyl group;
dimethoxymethyl group;

methoxyethyl group;
aminoethoxymethyl group;
azidoethoxymethyl group;
2-piperidinoethoxymethyl group;
pyrrolidinylethoxymethyl group;
morpholinylethoxymethyl group;
pyridinylethoxymethyl group;
piperidinylethoxymethyl group;
carboxyethoxymethyl group;
dimethyldioxolanylethoxymethyl group;
dimethyldioxolanylethoxyethoxymethyl group; and
dihydroxypropoxymethyl group.

Moreover, the present specification provides detailed synthetic procedures for preparing compounds in which C or E contains an alkyl group, which in turn contains a heteroatom which is either oxygen or nitrogen. Specifically, the Examiner's attention is directed toward the compounds of:

Examples 11, 12, and 14, which are depicted on page 117;
Examples 17-20 and 23, which are depicted on page 118;
Examples 26, 30, and 32, which are depicted on page 119;
Examples 33, 36, and 37, which are depicted on page 120;
Examples 44, 47, and 48, which are depicted on page 121;
Examples 49 and 54-56, which are depicted on page 122; and
Examples 58, 60, and 62-64, which are depicted on page 123.

Notably, the present specification also provides the results of the biological activity testing for Examples 12, 14, 20, 23, 33, 54, and 60 (*see*, Table 10, given on page 127).

For all of these reasons, the present specification clearly enables one of skill in the art to make and use compounds in which C or E is such a group.

Accordingly, the rejection should be withdrawn.

The rejection of Claims 1 and 32 under 35 U.S.C. § 112, second paragraph, has been, in part, obviated by appropriate amendment and is, in part, respectfully traversed.

First, it is respectfully submitted that although the words “an aryl group” do appear twice in the definition of C and E, there is no double inclusion. For the Examiner’s convenience, the definition of C and E is repeated below with line breaks inserted after each semicolon and with the term “an aryl group” in bold-face, italic type:

“C and E may be the same or different from each other and each represent hydrogen atom;

a lower alkyl group;

dimethoxymethyl group;

cyano group;

a hydroxy-lower alkyl group;

a carboxy-lower alkyl group;

a halogeno-lower alkyl group;

an amino-lower alkyl group, in which the amino group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, ***an aryl group*** or an aryl-lower alkyl group;

an azido-lower alkyl group;

an aryl group;

a pyridyl group;

a furyl group;

an aryl-lower alkyl group;

a pyridyl-lower alkyl group;

a furyl-lower alkyl group;

a pyridyl-lower alkoxymethyl group;

a furyl-lower alkoxymethyl group;

a pyridinylethoxymethyl group;

or a carbamoyl-lower alkyl group, in which the carbamoyl group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group or an aryl-lower alkyl group;

a piperidinylethoxymethyl group;

wherein said lower alkyl portion of said lower alkyl group, hydroxy-lower alkyl group, carboxy-lower alkyl group, halogeno-lower alkyl group, amino-lower alkyl group, azido-lower alkyl group, aryl-lower alkyl group, and carbamoyl-lower alkyl group may contain a hetero atom, which is selected from the group consisting of oxygen and nitrogen.”

As can be seen, the first appearance of the words “an aryl group” appears in the phrase “an amino-lower alkyl group, in which the amino group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group or an aryl-lower alkyl group; an azido-lower alkyl group.” Thus, the first appearance of the term “an aryl group” is in reference to a substituent which may be present when C or E is an amino-lower alkyl group. In contrast, the second appearance of “an aryl group” refers to the case when C or E is an aryl group.

Accordingly, the fact that the term “an aryl group” appears twice in the definition of C and E does not render Claim 1 indefinite.

Second, as noted above, the term:

“lower alkyl portion of said lower alkyl group, hydroxy-lower alkyl group, carboxy-lower alkyl group, halogeno-lower alkyl group, amino-lower alkyl group, azido-lower alkyl

group, aryl-lower alkyl group, and carbamoyl-lower alkyl group may contain a hetero atom, which is selected from the group consisting of oxygen and nitrogen”

simply means that when either C or E is a lower alkyl group, a hydroxy-lower alkyl group, a carboxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, an azido-lower alkyl group, an aryl-lower alkyl group, or a carbamoyl-lower alkyl group, then the lower alkyl portion of that group may contain a heteroatom which is either oxygen or nitrogen. This term does not permit a “dangling” heteroatom as stated at the bottom of page 3 of the Office Action.

Moreover, the present specification provides numerous examples of such groups (*see*, page 11, lines 2-12) and compounds in which C or E is such a group (*see*, Examples 11, 12, and 14, which are depicted on page 117; Examples 17-20 and 23, which are depicted on page 118; Examples 26, 30, and 32, which are depicted on page 119; Examples 33, 36, and 37, which are depicted on page 120; Examples 44, 47, and 48, which are depicted on page 121; Examples 49 and 54-56, which are depicted on page 122; and Examples 58, 60, and 62-64, which are depicted on page 123).

Third, Claim 1 has been amended to explicitly recite that C and E may be a “2-piperidinoethoxymethyl group.” In addition, the other recited heterocycle-containing groups have been deleted.

Claims are to be read in view of the specification. The test for definiteness is whether one of skill in the art could determine if a claim is infringed. Applicants respectfully submit that one of skill in the art could easily determine whether Claims 1 and 32 are infringed by a particular compound, especially in view of the teachings of the specification.

For these reasons, Claims 1 and 32 are not indefinite and the rejection should be withdrawn.

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Applicants submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

Respectfully submitted,

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